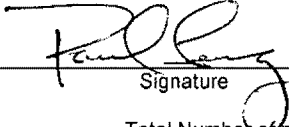


Docket No.: **2271/85487**

FORM PTO-1595 (Substitute) (Rev. 8-96)	RECORDATION FORM COVER SHEET <b>PATENTS ONLY</b>	U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.		
1. Name of conveying party(ies):  <b>Osamu MACHIDA; Akira SHIMOFUKU; Ryo TASHIRO; Atsushi TAKEUCHI</b>  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies):  Name: <b>RICOH COMPANY, LTD.</b> Internal Address: _____ Street Address: <b>3-6, Nakamagome 1-chome,</b> <b>Ohta-ku</b> City/State/Zip: <b>Tokyo, 143-8555, JAPAN</b>  Additional name(s) & address(es) attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3. Nature of Conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Assignment <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____  Execution Date(s): <b>August 9, 2013; August 9, 2013; August 9, 2013; August 9, 2013;</b>		
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date(s) of the application is (are): _____  A. Patent Application No.(s) <b>13/965,900</b>  B. Patent No.(s) _____  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: <b>Paul Teng</b> Internal Address: _____ Street Address: <b>COOPER &amp; DUNHAM LLP</b> <b>30 Rockefeller Plaza, 20<sup>th</sup> Floor</b> City/State/Zip: <b>New York, New York 10112</b>	6. Total number of applications and patents involved: <b>1</b>  7. Total fee (37 CFR §3.41): ..... \$ <b>40.00</b>  <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account  8. Deposit account number:  <b>03-3125</b>	
DO NOT USE THIS SPACE		
9. Statement and signature.  To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.  <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <b>Paul Teng, Reg. No. 40,837</b>            Name of Person Signing         </div> <div style="width: 30%; text-align: center;">             Signature         </div> <div style="width: 30%; text-align: center;"> <b>August 13, 2013</b>            Date         </div> </div> <div style="text-align: center; margin-top: 10px;">         Total Number of pages including cover sheet, attachments and document: <b>5</b> </div>		
OMB No. 0651-0011 (exp. 4/94)		
Mail documents to be recorded with required cover sheet information to: Mail Stop Assignment Recordation Services Director of the United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450		

CH \$40.00 033125 13965900

Application No. 13/965,900

Filed On 8/13/2013

Dkt. 2271/ 85487

## ASSIGNMENT

*In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, I/we, the undersigned,*

*Hereby sell, assign and transfer to RICOH COMPANY, LTD., a corporation of Japan, having a place of business at 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo 143-8555, Japan, its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and as possessed by the undersigned, any and all inventions which are disclosed but not claimed, in the application for United States Patent, which was executed by the undersigned concurrently herewith and is entitled*

AN ELECTRO-MECHANICAL TRANSDUCER ELEMENT, LIQUID DROPLET  
EJECTING HEAD, IMAGE FORMING APPARATUS, AND ELECTRO-MECHANICAL  
TRANSDUCER ELEMENT MANUFACTURING METHOD

*and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;*

*Authorize and request Director of the United States Patent and Trademark Office to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;*

*Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal*

Page 2

*representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and*

**COVENANT** *with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.*

Date: August 9, 2013

Osamu Machida [L.S.]  
OSAMU MACHIDA

Date: August 9, 2013

Akira Shimofuku [L.S.]  
AKIRA SHIMOFUKU

Date: \_\_\_\_\_

\_\_\_\_\_[L.S.]  
RYO TASHIRO

Date: August 9, 2013

Atsushi Takeuchi [L.S.]  
ATSUSHI TAKEUCHI

Dkt. 22711/

## ASSIGNMENT

*In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, I/we, the undersigned,*

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*and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;*

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*Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal*

Page 2

representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

**COVENANT** with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: \_\_\_\_\_ [L.S.]  
OSAMU MACHIDA

Date: \_\_\_\_\_ [L.S.]  
AKIRA SHIMOFUKU

Date: August 9, 2013 \_\_\_\_\_ [L.S.]  
RYO FASHIRO

Date: \_\_\_\_\_ [L.S.]  
ATSUSHI TAKEUCHI